located relative to: the element for emitting light and the light conducting element so as to reflect light from the element for emitting light axially into the light conducting element by way of its associated light input region.

41. The light outputting device according to claim 38, further incorporating a refractor located relative to: the element for emitting light and the light conducting element so as to refract light from the element for emitting light axially into the light conducting element by way of its associated light input region.

42. The light outputting device according to claim 38, wherein the containment is substantially opaque such that light can only pass out of the containment from the element for emitting light by way of the light conducting element.

43. The light outputting device according to claim 38, further incorporating heat transfer means in intimate contact with, or forming an integral part of, the containment whereby heat generated by the element for emitting light is dissipated.

44. The light outputting device according to claim 38, further incorporating heat transfer means in intimate contact with, or forming an integral part of the light conducting element whereby heat generated by the element for emitting light is dissipated.

45. The light outputting device according to claim 38, wherein the containment serves to define a plenum about the element for emitting light whereby a vacuum or ain inert gas or a mixture of gases to be maintained by means of the plenum about the element for emitting.

46. The light outputting device according to claim 38, wherein the element for emitting light is contained in an envelope within the containment and the envelope serves to define a plenum about the element for emitting light whereby a vacuum or an inert gas or a mixture of gases to be maintained by means of the envelope about the element for emitting light.

47. The light outputting device according to claim 38, further incorporating means for varying the color of light output by the device.

48. The light outputting device according to claim 38, wherein the element for emitting light comprises more than one light emitter so that the element for emitting light can be used to

emit more than one light wavelength.

49. The light outputting device according to claim 38, wherein the containment serves to provide location means for the device adapted for complementary engagement with an external device whereby the device can be demountably attached by means of the light conducting element or an extension thereof to a further light conducting path in a predetermined position relative to a path datum.

50. The light outputting device according to claim 38, wherein the containment comprises a housing defining a passage in which the light conducting element is located, the passage has an inner end located within the containment service as a wall of a chamber within the containment; and the chamber serves to locate the element for emitting light.

51. The light outputting device according to claim 50, wherein the housing is opaque.

52. The light outputting device according to claim 50, wherein the chamber serves to house, or has a boundary region serving to define, means for reflecting or refracting light emitted by the element for emitting light axially into the light conducting element by way of its associated light input region.

53. The light outputting device according to claim 50, wherein the containment incorporates integral fins or has in good thermal exchange contact with a member incorporating fins; and the fins serve to radiate or otherwise dissipate heat generated by the element for emitting light and transferred to the fins by way of the containment.

54. The light outputting device according to claim 50, wherein the containment includes a further passage whereby the chamber can be communicated with from outside the device to provide for one of varying the pressure in the chamber and supplying the chamber with a one of gas and vapor.

55. The light outputting device according to claim 50, wherein the containment comprises two parts demountably coupled to one another so that when uncoupled form one another the two uncoupled parts expose the interior of the chamber.

56. The light outputting device according to claim 55, wherein the two parts of the

containment each provide or contain a path of electrically conducting material and when assembled the two paths are: electrically insulated from one another and coupled to the element for emitting light to enable electrical power to be supplied to the element.

57. The light outputting device according to claim 50, wherein the containment includes a further passage for a conducting means for supplying electrical power to the element for emitting light.

58. The light outputting device according to claim 57, wherein the further passage can extend one of axially along and radially from the device.

59. The light outputting device according to claim 38, wherein the element for emitting light comprises one or more of the following:

a resistive filament;

an arc;

a discharge device;

a solid state emitter (PN junction); and

a coherent light source with means for light stimulation and amplification.

60. The light outputting device according to claim 38, wherein light conducting element is of fused quartz or other glass like material.

61. The light outputting device according to claim 38, wherein the containment is of fused quartz or other glass like material.

62. A method of fabricating a light outputting device having a containment for housing an element for emitting light, the containment having a longitudinal axis and a width transverse of the longitudinal axis; a light conducting element extending axially from the containment and having an axial length substantially greater than the transverse width; the light conducting element being aligned co-axially with the element for emitting light in the containment by means of the containment or an extension thereof; the width of the light conducting element being similar to the transverse width; and the light conducting element having a light input region whereby light generated by the element is enabled to pass axially into the light conducting

a' cont.

element, wherein the steps of providing the light conducting element in the form of a longitudinal member with end faces and an outer surface apart from the end faces; locating around the light conducting element a sleeve member of greater length than the light conducting element with a first end of the light conducting element at or near one end of the sleeve so as to leave a length of sleeve projecting beyond the opposite end of the light conducting element the first end; the opposite end of the light conducting element to the firs end forming, at least in part, the light input region; causing the sleeve member to be contiguously juxtaposed with the outer surface of the light conducting element; locating the element for emitting light in the length of sleeve projecting beyond the opposite end; deforming the length of sleeve so as to form together with the light input region of the light conducting element the containment for the element for emitting light; and sealing the deformed length of tube to caus the containment to form a gas tight enclosure for the element for emitting light.

63. A method of fabricating a light outputting device according to claim 62, wherein the sleeve is of a similar material to the light conducting member and the step of causing the sleeve member to be contiguously juxtaposed with the outer surface of the light conducting element comprises a fusing operation.

64. A method of manufacturing a light outputting device according to claim 62, wherein the sleeve is of a translucent or opaque material having a thermal coefficient of expansion comparable with that of the light conducting member.

65. A method of manufacturing a light outputting device according to claim 62, wherein the step of locating the element for emitting light in the length of sleeve projecting beyond the opposite end includes locating conductors for supplying energy to the element.

66. A method of manufacturing a light outputting device according to claim 62, wherein the step of locating the element for emitting light in the length of sleeve projecting beyond the opposite end includes locating a mirror element for reflecting light generated by the element for emitting light to enable the mirror element to be enclosed with the element for emitting light in the containment prior to the deforming and sealing steps.

a' concl.

67. A method of manufacturing a light outputting device according to claim 62, wherein the step of locating the element for emitting light in the length of sleeve projecting beyond the opposite end includes locating a lens element for refracting light generated by the element for emitting light to enable the lens element to be enclosed with the element for emitting light in the containment prior to the deforming and sealing steps.

68. The array comprising at least two light outputting device devices, according to claim 38 or fabricated by means of a method according to claim 62 and a light guide array linking the or at least one light conducting element to a light output location remote from at lease one device.

69. The array according to claim 68 wherein at least one of the devices is coupled to a heat exchange means whereby heat generated by the device is dissipated such as by natural or forced convection utilizing gas or liquid coolant.

70. The array according to claim 68, further incorporating in the light guide array or the light output location means for varying the color of light originating from at least one of the devices.

71. The array according to claim 70, wherein at least one of the devices is demountably attached to the array and a magazine of replacement devices is located for the demountably attached device to enable the demountably attached device to be readily removed and replaced by a replacement device from the magazine thereof.

72. The array comprising at least two devices according to claim 38.

ght in the containment prior to the deforming and sealing steps.

REMARKS

Please enter the above before consideration of this application. With respect to the above newly entered claims, please note that the subject matter of the Chapter II amended claims is editorially revised and rewritten to bring that subject matter into conformity with the United States claim format.